

Reham

: RAUNDS :

URBAN DISTRICT COUNCIL.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

W. MACKENZIE,

Fellow of the Incorporated Society of Medical Officers of Health,

Fellow of the Royal Institute of Public Health, &c.

1913.

Raunds :

Printed by F. W. MARCH, 17, High Street.



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To the Raunds Urban District Council.

RAUNDS,

March, 1914.

Gentlemen,

I have pleasure in presenting my Annual Report for the year 1913, to which is added Statistical Tables of Births, Deaths, etc.

The area of Raunds Urban District is 4387 Acres, and the population 3874.

The number of inhabited houses is 845, which gives an average of about 4·5 persons per house.

BIRTHS.—The number of Births registered in the District is exactly the same as last year, viz., 80. To this has to be added 1 Transferable Birth, which makes the nett number of Births for the District 81. The Birth Rate therefore is 20·65, the same as in 1912; that of the two preceding years being 19·6, and 18·0 respectively. This is below the Birth Rate for England and Wales, which was 23·9 per thousand of the population for 1913, compared with the average rate in the 10 years 1903-1912, the birth-rate in 1913 showed a decrease of 2·4 per 1000 in England and Wales.

Of the 81 Births, 43 were males and 38 females. Two illegitimate births were Registered, the same number as in 1912—the number in 1911 was three.

DEATHS.—The number of Deaths from all causes and at all ages Registered within the District was 45, which gives a Death Rate of 11·09 per 1000 of the population, but to this has to be added 6 deaths of Residents not registered in the District, so that the nett Death Rate for the year 1913 was 13·1, as against the Rate for 1912, which was only 9·0 per 1000 of the population, the lowest ever recorded here. The rate for 1911 was 12·9 per 1000, so that the Death Rate for Raunds Urban District is practically the same as that of England and Wales, which was 13·7 per 1000 in 1913. Compared with the average rate for the 10 years 1903-12, the Death Rate for England and Wales showed a decrease of 1·2 per 1000.

Classified according to age, the nett Deaths Registered were as follows :—

7 died under 1 year			
1	„	between 1 and 2 years	
1	„	2	5
4	„	5	15
2	„	15	25
3	„	25	45
7	„	45	65
26 „ at 65 years and over			

It will be seen that no fewer than 26 died over 65 years of age, that is more than one half of the total deaths for the year, 23 were over 70, and of these 7 were over 80, and one in his 90th year. No inquests were held during the year.

The causes of death of the 6 Residents, registered outside the District were:—Cerebral Hæmorrhage, Cerebral Embolism, Cancer, Epilepsy, Heart Disease, Pulmonary Tuberculosis. These deaths took place at Thrapston Workhouse Infirmary (4) and The County Lunatic Asylum (2).

The causes of all deaths registered in the District including outsiders, were as follows :—1 Diphtheria, 7 Pulmonary Tuberculosis, 1 Tuberculous Meningitis, 3 Other Tuberculous Diseases, 3 Cancer, 8 Organic Heart Disease, 2 Bronchitis, 2 Diarrhœa, 2 Cirrhosis of Liver, 3 Premature Birth, 4 Cerebral Hæmorrhage, 1 Enteric Fever, and 14 other defined diseases, principally Senile Decay.

INFANTILE DEATH RATE.—The number of deaths of children under 1 year of age was 7, which is 3 more than that of the preceding year. This gives an Infantile Death Rate of 87·5 per 1000 births registered. The rate was 50·0 in 1912, and 65·78 in 1911.

The causes of death were:—Premature Birth 3, Diarrhœa 1, Bronchitis 1, Other Tuberculous Diseases 2. It will be seen that no deaths occurred from Pneumonia, only 2 from Bronchitis, and none from other diseases of the respiratory organs. Cancer caused 3 deaths in 1913, and 2 in 1912. The Death Rate therefore was ·77. Pulmonary Tuberculosis caused 7 deaths, six at home and 1 in the County Asylum. Of these 7, two were males, aged 24 and 44; both cases were of long standing and had been periodically under medical treatment for some years. The other 5 deaths were those of females, of which one, aged 13, had been under treatment in the County Asylum for 12 months prior to her death. The other 4, whose ages were 13, 20, 28, and 48, died at home: one aged 48 had

been affected for years, the others had been affected for a year or more, and all had domiciliary treatment for from 9 to 12 months. The Death Rate therefore in 1913 was 1.73 per 1000 of the population. In 1912 the number of deaths from this disease was 3, which gave a death rate of .774. For the three preceding years the numbers who died were 4 in 1911, 7 in 1910, and 6 in 1909. In 1912, at the end of the year, 22 cases had been reported : 3 died, 6 recovered in Sanatorium, 1 in Sanatorium, then 2 under domiciliary treatment, and 10 recovered at home. In 1913 nineteen cases were reported : 1 under 5 years of age, 4 from 5 to 15 years, 4 from 15 to 25 years, 8 between 25 and 45 years, and 2 between 45 and 65. Of these cases 11 were females and 8 males. Only 2 males and 1 female were admitted to a Sanatorium in 1913: 2 returned recovered and are at work, and 1 male is still in Creaton Sanatorium doing well. Three who were reported in 1913 died. All the others are doing well, with the exception of 3 or 4 very badly complicated cases still under treatment at home. The 3 cases of other forms of Tuberculosis are still under treatment. It may be mentioned that of the 19 cases reported in 1913, only 7 were factory workers, the others were either under age or followed some other employment or no employment.

Taken altogether, I am convinced that patients suffering from Pulmonary Tuberculosis or other forms of Tuberculosis, either as insured persons or dependents of insured persons, under the National Insurance Act have a better chance of recovery than they had before, whether they receive sanatorium or domiciliary treatment, because many who could not afford to purchase the necessary nourishment for such cases are now having it purchased for them, and although some of the newspapers sneer at the fact that such things as milk, beef, eggs, extract of malt and cod liver oil, etc., are provided to the insured persons or their dependents free, yet so far as I am concerned I am glad to say that many patients here are very thankful for it, and much benefited by this addition to their treatment, which in many cases they could not otherwise afford to provide for themselves.

Sanatorium patients from this district have done wonderfully well, and I am only sorry that more of them have not been able to be admitted up to now.

In every case of Primary Notification of Tuberculosis, I visit the house at once, and see that everything about the house and rooms are in a healthy condition, and the windows open day and night. I also continue to make regular visits so long as the patient is ill. A Nurse from the Wellingborough

Tuberculosis Dispensary also calls to see every patient who is under treatment about once a week, giving instructions to those in charge of the patients, and seeing that the instructions of the medical attendant are carried out. Every patient reported is also seen and examined by Dr. Muriset, the Chief Tuberculosis Medical Officer for the County, either at home or at the Wellingborough Tuberculosis Dispensary. All patients who are able to be out in the open air are seen by me once a week at my surgery. In the case of primary notification, every person living in the house occupied by the patient is examined carefully for the detection of unrecognized cases of Tuberculosis. In every case of Primary Notification, a notice is sent by me to the Chief Tuberculosis Officer, who comes here to examine the patient and his relations if the patient is not able to go out, or if able to do so, the patient goes to the Wellingborough Tuberculosis Dispensary to be examined there; the address is then taken down and the tuberculosis nurse has instructions from Dr. Muriset to visit the house of the patient once a week; each patient is then recommended either to have domiciliary or sanatorium treatment, according to the wishes of the Chief Tuber. Med. Officer.

The nurse sees that the house and rooms are kept in a sanitary state, and after recovery or in case of death, the room or rooms are thoroughly disinfected and cleansed by the Inspector of Nuisances and his assistants.

The nearest Sanatorium is situated at Creaton, near Northampton, 22 miles distant, and a Tuberculosis Dispensary has been opened at Wellingborough, where patients can be seen by the Chief Tuber. Med. Officer for the County once or twice a week.

Up to now the Notification of Births Act has not been in force in this District, and notifications were sent to me by the District Midwife, but now the Act has been adopted.

The Infantile Death Rate of 87·5 per 1000 births registered is still too high, but when we consider that 3 out of the 7 deaths of infants were due to premature birth, then the number of deaths from preventable causes was fairly low compared with other places, and in connection with this I may mention that a Lady Health Visitor calls regularly every week on those who have young children to bring up, and no doubt gives valuable help to the mothers regarding the feeding and up-bringing of their infants.

NOTIFIABLE INFECTIOUS DISEASES.—The number of Notifiable Infectious Diseases notified during the year, leaving out tuberculosis cases was 19, viz., one case of diphtheria, 3 of

erysipelas, 14 of scarlet fever, and one of enteric fever. Diphtheria has been prevalent in the county, and we were fortunate in only having one case in 1913. The enteric fever case was no doubt imported, and as the patient was also an epileptic, brain symptoms intervened and caused death.

The 14 cases of scarlet fever were generally of a mild type, and no deaths occurred from that disease. The cases were mostly one case in each house, and home isolation was so well carried out that there was no danger at any time of an epidemic. In every case the body was anointed daily with carbolic oil, and in every case the house was thoroughly disinfected when the time was up for doing so.

ISOLATION HOSPITAL.—I may now remind you that the Isolation Hospital, which is of wood and iron contains 8 beds in two wards of four beds each. Each ward measures 20ft. by 20ft., the nurse's room is 10ft. by 10ft., and the hall 10ft. by 10ft. The outside is of iron and the inside lining of wood, all the woodwork is varnished; verandah with concrete floor and brick foundation. The floor is raised 18 inches from the ground, well ventilated underneath, and cemented all over the site to prevent dampness. The wards are heated by slow combustion stoves, and ventilators are placed on the roof. The whole place is lighted by windows on either side. The site is 210 feet above sea level, on ground sloping to the westward. The field is a mile from Raunds and nearly half-a-mile from the nearest house, and 400 yards from the road. It contains 16 acres of ground and is surrounded by a very strong hedge 15 feet in height.

As the Hospital is in a rather inaccessible place and too far out of reach, it has been proposed that it should in the near future be removed from its present position and reconstructed on higher and drier ground nearer to Raunds, so that if necessary it might at any moment be utilised. I believe that several suitable sites are available, and no doubt the removal of this Hospital will take place during the summer months, so that it may be ready for use when required.

RAUNDS NEW COUNCIL SCHOOLS.—As I said in my last year's Report (1912):—"After a great deal of correspondence between this Council and the County Education Committee, it was at last decided to build a School to accommodate 450 children, and that plans were then being prepared by the County Education Committee for that purpose, and that it was their intention to have the schools completed and ready for use in less than 12 months from that time. Now the actual work has begun and excavations for the foundations are going on briskly, so that before another year there is every probability that the

new schools will be in full operation, and there is no doubt the site is a splendid one for the purpose."

Now the work is nearing completion : the ceilings have been finished, the walls are being distempered, and the wood blocks to the floors are being laid. Most of the drainage work is in working order, and the sanitary fittings are being fixed in position ; the hot-water heating apparatus has been tested and is ready for use, and there remains the levelling of the playgrounds, their ashphalting, and the fixing of the partitions and front fencing. The schools should be available for use at or very shortly after Easter, 1914.

The Church of England Schools, as I said last year, now stand modernized and thoroughly equipped both as regards sanitary conditions and educational purposes.

The school children in both schools are periodically examined by the School Medical Officer, and the arrangements for the discharge of his duties are very satisfactory, and no doubt much benefit is derived by the scholars, as many children's diseases and defects are discovered which would otherwise have been allowed to go on without treatment till it was too late.

WATER SUPPLY.—Raunds District is supplied with water from a well sunk in a field near the Meadow Road, on the West side of Raunds, $1\frac{1}{4}$ miles from the town and in a place very safe from any danger of contamination. The water, which is of excellent quality, comes from the alluvial gravel at a depth of about 14 feet from the surface, and after repeated borings it was found that the gravel was covered with two beds of impervious clay, which continued from the river under the brook to the site of the well. The borings on either side of the brook showed these impervious beds to be 13ft. 6ins. in depth before reaching the gravel.

The water is pumped from the Water Station to a large reservoir on a field on the Hargrave Road, near the "Red House" and at an altitude sufficient to throw it to the top floors of the highest buildings within the District, as well as for fire purposes. The water has scarcely any plumbo-solvent action. Analyses have been made regularly by Mr. West Knights, Analyst, of Cambridge, in 1911, 1912 and 1913, and in every case the report has been most satisfactory. One of the reports for 1913 is added in the appendix. During these three years the analyses have all been most satisfactory, and during abnormal months of rain or abnormal drought there has been no fluctuation in quantity nor change in quality, and there seems to be no reason to doubt the perfect safety of the water from

contamination. 808 houses are supplied with water direct from the town water mains.

SEWAGE DISPOSAL WORKS.—Since the completion of the scheme for treating the sewage of the District on bacteriological lines as proposed and carried out by your Surveyor, the whole process has been carried out in a most satisfactory manner, and the sewage-distributors to the filter-beds have done their work splendidly, and the effluent which is discharged into the water-course has been most satisfactory according to the analysis of Mr. J. West Knights, Analyst of Cambridge. There is very little smell given off from the works, the sludge is being carried away as soon as it is dry enough for cartage to the adjacent land. The main sewer continues in good working order, and no complaints have been made about bad smells during the year.

The Raunds Brook continues to be free from smell and has only had to be cleaned out occasionally in some of the open places during the summer months.

The scavenging of the town is carried out satisfactorily by your own scavengers and there have been no complaints.

With the exception of 25 houses which are outside the Sewerage area, and therefore have pail closets, every house in the District is provided with water closets; 589 houses have proper water closets provided with flushing appliances and water laid on, 123 houses have water closets flushed by hand, and 160 have closets of the waste water type; 9 houses outside the Sewerage area have their drains discharged into a cesspool. Every house in the town has been connected with the public Sewer.

SANITARY INSPECTIONS OF THE DISTRICT—The following are particulars with respect to the inspections of dwelling houses and nuisances found and abated in the District during the year, and this includes the statement made by Mr. Yorke, Inspector of Nuisances, on that subject:—527 houses were inspected; 5 Statutory Notices were served; 59 informal notices were sent; 7 cases of overcrowding were discovered and dealt with; 21 blocked drains were rectified; 7 blocked gullies were cleared; 14 water closets were found blocked and cleared; 7 houses were found to be without proper receptacles for house refuse, and these were provided; 2 accumulations of house refuse were removed; 1 closet provided to a workshop which had not sufficient closets for both sexes; 4 factory drains found blocked and were cleared; 11 W.C's were found in an unsatisfactory condition owing to an insufficient supply of water

and flushing appliances, and rectified; 18 water closets were provided with flushing appliances and water laid on; 8 pail closets were converted into water closets; 18 houses without a proper water supply had the Town water laid on; 2 waste water closets were taken out and water closets with flushing appliances fixed; 2 cowsheds with defective floors were made good; 1 cowshed had defective drain rectified; 2 accumulations of manure removed; 1 pig house removed as a nuisance; 19 houses were disinfected after cases of infectious disease; 1 prosecution for non-abatement of nuisance took place; 10 houses disinfected after cases of Pulmonary Tuberculosis.

Slaughter Houses and Cowsheds were periodically inspected during the year and were found to be satisfactory, with a few exceptions, which were rectified.

Section 22 of the Public Health Act has been adopted here, and a standard of efficiency and suitability of sanitary accommodation has been fixed and enforced—Standard, 20 for males and 16 for females. A few defects were found and remedied.

There are 20 Registered Workshops in the District. There are no underground Bakehouses in the District and the Bakehouses were found to be in a satisfactory state.

*Housing (Inspection of District) Regulations of
2nd September, 1910.*

Article V.—The number of dwelling houses inspected under and for the purposes of Section 17 of the Act of 1909, were 182.

The number of dwelling houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation were 32.

The number of representations made to the Local Authority with a view to the making of Closing Orders were 32. The number of Closing Orders made was 11.

The number of dwelling houses the defects of which were remedied without the making of Closing Orders was 3, and 12 in hand being remedied at the close of the year.

The number of dwelling houses which after the making of Closing Orders were put into a fit state for human habitation was 6, and 3 in hand at the close of the year.

The number of dwelling houses demolished as being unfit for human habitation was 9.

The number of dwelling houses found to be overcrowded and dealt with was 7.

The number of dwelling houses closed as being unfit for human habitation, but not yet demolished at the end of the year was 2.

The chief defects found in the above dwelling houses were—dampness, defective roofs, structural defects, and insufficient light and ventilation.

Regular inspections have been made during the year by Mr. T. Yorke, Inspector of Nuisances, and myself, of the housing accommodation in the District and a great deal was done during the year in connection with that work. It may be said that the housing accommodation for the working classes in the District is ample and no new houses were erected or required during 1913. Many of the old houses have either been demolished or made fit for human habitation; some have been closed and will no doubt be demolished very soon. The number of houses unoccupied at the end of the year was 30 (approximately), in 1912 about 50 were empty, and in 1911 no fewer than 60 houses were unoccupied, so that it will be seen that housing accommodation in Raunds District is more than sufficient for the inhabitants. The number of unoccupied dwelling-houses however fluctuates according to the amount of shoe work in hand, but for the past 3 years the number has never been fewer than 30, and many of those 30 are the newest and best houses in the District.

As will be seen in the appendix a great deal of work has been done by the Inspector of Nuisances in connection with housing accommodation, no fewer than 527 houses having been inspected during the year. The water closets, drains, roofs, floors, pavements, etc., of dwelling-houses were inspected, and alterations made when necessary, town water laid on to houses without a proper supply, nuisances removed, houses disinfected after infectious disease, etc., and in connection with this work I include in my report the report of Mr. T. Yorke, Inspector of Nuisances, which he now presents to you as follows:—

Gentlemen,

I have pleasure in submitting my Annual Report for the year ending 1913.

The houses within the district have been periodically inspected during the year, and all nuisances detected have promptly been dealt with, and in most cases the nuisances found have been abated without the necessity of serving Statutory Notices.

Cowsheds and Dairies have been inspected periodically. Notices have been served in two cases requiring the Cowsheds to be properly paved, cleansed and repaired, and in one case the reconstruction of drains. It is the general custom of cow-keepers within the district to turn their cows out for grazing during the greater part of the year.

Slaughter Houses have been generally well kept and I have found very little to complain of. There have been no seizures of unsound meat during the year. The quality of meat sold within the district is generally good.

Bakehouses on inspection have been found in a very clean condition. The regulations with respect to lime washing have been properly complied with.

Every house in which any infectious disease has occurred has been properly disinfected.

The collection and removal of house refuse has been well carried out by the Council's workmen. There are now only a very few ashpits within the district ; these are covered in to comply with the bye-laws of the district. The greater part of the houses are supplied with galvanised ash bins. These are emptied once a week and the contents carted away in a modern covered dust cart to a tip (an old clay pit) a considerable distance from any dwelling.

I am pleased to be able to report that the night collection of closet pails is now a thing of the past. Every house within the drainage area is provided with a water closet. The several pail closets remaining are at isolated houses, including farm houses, farm labourers' cottages, etc. There are of these houses about thirty three.

There are about 589 houses having water closets with proper flushing appliances and water supply.

There are about 123 houses having water closets which are flushed by hand. These were fixed before the town had a proper water supply. Closets are not allowed now unless they are provided with flushing appliances and a water supply thereto.

There are about 160 houses having wash water closets. These were allowed where there was no water on the premises. This type of closet is not allowed to be fixed since the completion of the water-works. The wash-down type of closet, with flushing cisterns, has been required in all cases where water-closets have been constructed.

Every house within the District now has a proper system of drains, which are connected with the public sewer, with the exception of the few isolated houses. The drains have been generally well laid, having gradients sufficient to give self-cleansing velocities, but owing to the following causes we sometimes get drains blocked : the insufficient flushing of hand-flushed closets ; slops thrown down closets containing cloths, brushes and other articles ; children throwing articles into

closets and gulleys, and through silt being washed into drains in unpaved areas. The stoppages are chiefly found at the disconnecting trap.

The Public Sewers have been kept properly flushed, and in good order. No complaints have been made with respect to bad smells emanating therefrom.

The 9 in. Sewer in Park Road has been lowered and extended for the purpose of receiving the drains of the New Council Schools. The sewer has been extended along Wellington Road and Chelveston Road to receive the drains of "Westfields," which formerly discharged into a large cesspool.

The construction of 700 yards of 8 in. sewer has been commenced up London Road to receive the drains of the new Scattered Homes and several houses. This will dispense with three more cesspools. This leaves three cesspools within the district that could be abolished by extending the sewers a short distance. There are besides a few cesspools remaining which are not within a reasonable distance of a sewer. They are chiefly cesspools receiving the drainage from farm houses and premises.

During the year a 15 in. relief sewer has been constructed in Red Row gardens to relieve the main sewer during abnormal rainfalls. The main water-course and tributary water-courses have been thoroughly cleaned out; also the culverts and obstructions have been removed. A considerable length of culvert has been repaired in Thorpe Street and properly inverted. The culvert running under the Square and High Street has been thoroughly cleaned out and repaired in places. Flood prevention works have been carried out, and a scheme of enlarging and re-constructing the culvert running from the main culvert in Red Row gardens to Brook Street has been approved by the Local Government Board.

The supply of water at the pumping station, although we have had an exceptionally dry period, continues to be satisfactory, and the samples sent for analysis, have on the report of the analyst, been of good quality. The first service connection was made with the water-mains in August, 1909. Since then water has been laid on to 808 houses, besides many meter supplies and factories, farm premises and business places. The houses remaining not connected have wells on the premises: these, I hope in time will take their supply from the water mains. Water has been laid on to eighteen homes during the year, two factories and two farm premises; and eleven hand-flushed closets have been provided with flushing appliances and water laid on to same.

Factories and workshops have been periodically inspected. The whole are provided with modern sanitary conveniences for both sexes. I have found several cases where sufficient water has not been used for flushing the closets ; this applies to closets where automatic flushing cisterns are fixed for flushing the closets. These cisterns should have a constant supply during working hours, sufficient to keep the closets and drains flushed and in a clean condition. The floors of the sanitary conveniences in some cases are not kept as clean as they should be ; this could be remedied by the owners deputing a person to cleanse them after each day's work, together with the assistance of the work-people using them.

HOUSING AND TOWN PLANNING ACT.—Systematic inspections have been made of dwellings during the year. Eight houses have been demolished ; two cottages closed as being unfit for habitation ; notices have been served with respect to thirty-five houses ; twelve have been repaired and put in a habitable condition ; seventeen at the present time are being dealt with.

There are about 435 houses of modern construction within the District. These have three bedrooms, two living-rooms and a scullery. There are about 320 houses of less modern construction, having two and in some cases three small bedrooms, and two living-rooms. There are about 80 old stone-built cottages of the rural type ; these vary in size from one bedroom and one living-room to two and three bedrooms and living-rooms. Some eighteen of this class of cottage have either been demolished or closed since the passing of the Housing Act.

There have been seven cases of overcrowding dealt with during the year. In one case it was necessary to obtain a Magistrates' Order.

I remain, Gentlemen,

Yours obediently,

THOS. YORKE.

FACTORY AND WORKSHOPS' ACT.—The Factories and Workshops within the District have been regularly inspected by Mr. Yorke and myself during the year, and any matters connected with the sanitation of them have been attended to. The amount of work now given to outworkers is very much less than formerly. I mentioned 2 years ago that work people in Factories would find it more healthy if they would see that sufficient window hoppers within the Factory were kept open, even when there is artificial means of ventilation provided.

The windows should be kept open as one is more susceptible to colds and disease when breathing air overcharged with carbonic acid gas, and there is no doubt it would be better if the law compelled the men to have every window in the Factory open all day. In the meantime those who would open them are not allowed to do so by others who want them closed and the result is that in winter many or nearly all the windows in some parts of the Factories are kept closed all day, and the room which is heated by hot water pipes becomes very hot and stuffy, with the result that when the worker goes out into the cold air he is much more liable to chills or colds, or even worse. Many quarrels take place among factory workers on this subject of opening windows in winter, and it would be much better if the law made it compulsory.

146 Inspections of factories, workshops and workplaces were made during the year. Inspections of factories 66, of workshops 54, and workplaces 26. Fourteen written notices were served on factory owners, and one each on workshops and workplaces, being in all 16 notices. No prosecutions were necessary. Four cases of nuisances under the Public Health Acts were found in factories and remedied. One offence under the Factory and Workshop Acts found and remedied.

The number of workshops registered in the District was 20, including tailors, milliners, dressmakers, bakers, etc.

Outworkers' Lists sent twice in the year were 4 for 18 workmen. Lists sent once a year were 8 for 48 workmen. Eight notices were served on occupiers as to keeping or sending Lists.

Altogether the proprietors of factories in Raunds are very willing to keep within the law, and to carry out any suggestions made by Mr. Yorke or myself on sanitary matters in their factories.

Altogether the sanitary condition of Raunds compared with what it was some years ago, has improved wonderfully, and when we look back to the time, not many years ago, when Raunds was annually infected with Typhoid Fever, for which it was notorious all over the country, and compare it with what it now is, we can see the great change in the appearance of the place and in the general health of the people.

I may say that in the twelve years from 1889 to 1901, Enteric Fever was only one year absent, and on two occasions we had 153 cases in one year, and 155 in another. Altogether we had 511 cases of Enteric Fever in the twelve years prior to 1901, and from that time to now there has only been in all a

dozen cases in 13 years, and those have almost all been imported from other places.

During the 13 years we have done a great deal of work and spent a great deal of money in the sanitation and housing of the people, and there is no doubt the continued absence of Fever is entirely due to the improved condition of the streets, houses, pavements, drains, and all the sanitary arrangements of the place, and above all to the Public Sewer and up-to-date Sewage Disposal Works, and the Public Water Supply, which has been the greatest boon ever given to Raunds.

When an Inspector of the Local Government Board visited Raunds in 1912, I gave him statistics to show that we had spent in about 12 or 13 years on Water Works, Public Sewer, Sewage Disposal Works, and on new streets and sanitary improvements, over £20,000, and there is no doubt we are now reaping the benefit and preventing many lives being lost every year from Fever, as well as the terrible sufferings of the victims who survived, and months of trouble and anxiety to the friends who attended them. I only mention these facts to show what improved sanitation and pure water supply can do in a few years. We are far from being perfect yet, but can show as clean streets and as clean dwelling houses as any other District of this size in the county; and whatever is still necessary to be done in sanitary work for the welfare of the working people here, will be done without delay.

I have to thank Mr. L. G. H. Lee, F.R.Met.S., for his very interesting and exhaustive Report upon his observations during the year, which I have placed in the appendix. Mr. Lee has made considerable additions to his instruments and has now one of the best equipped Meteorological Stations in the country. The outstanding feature of his Report for 1912 was the abnormal rainfall, but for 1913 it was the very opposite, the rainfall being far below the average.

I remain,

Yours faithfully,

W. MACKENZIE,

L.R.C.S. & L.R.C.P. Ed., &c.

18th MARCH, 1914.

Deaths in Raunds Urban District during the year 1913.

CAUSES OF DEATH.	All Ages	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and up- wards
Enteric Fever ...	1	...	...	...	...	...	1		
Diphtheria and Croup	1	...	...	1					
Phthisis (Pulmonary Tuberculoses)	7	...	...	...	2	2	2	1	
Tuberculous Meningitis	1	...	...	...	1				
Other tuberculous diseases	3	2	...	...	1				
Cancer, malignant disease	3	...	...	...	...	...	...	...	3
Organic Heart Disease	8	...	...	...	...	...	...	3	5
Bronchitis	2	1	...	...	...	...	...	...	1
Diarrhœa and Enteritis ...	2	1	1						
Cirrhosis of Liver	2	...	...	...	...	...	...	...	2
Congenital Debility and Malformation, including Premature Birth	3	3							
Other defined Diseases	14	...	...	...	...	...	...	1	13
Cerebral Hæmorrhage	4	...	...	...	...	...	...	2	2
TOTALS	51	7	1	1	4	2	3	7	26

Vital Statistics of Whole District during 1913 and previous years.

Year.	Population estimated to middle of each year.	Births.			Total Deaths registered in the District.		Transferable Deaths		Nett Deaths belonging to the District.			
		Un-corrected Number	Nett		Number	Rate	of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 year of age		At all ages.	
			Number	Rate					Number	Rate per 1,000 Nett Births		
1908	4320	....	120	28.0	52	12.0	....	....	13	108.3	52	12.0
1909	4320	....	91	21.0	40	9.2	....	....	4	43.9	40	9.2
1910	4320	....	78	18.0	47	10.9	....	....	8	102.7	47	10.9
1911	3874	....	76	19.61	44	11.35	....	6	5	65.7	50	12.9
1912	3874	....	80	20.65	30	7.7	....	5	4	50.0	35	9.0
1913	3874	80	81	20.65	45	11.09	....	6	7	87.5	51	13.16

Area of District in Acres, 4387.

Total Population at all ages, 3874.

Number of inhabited houses at census of 1911, 850.

Average Number of persons per house, 4.5.

Cases of Infectious Diseases notified during the year 1913.

NOTIFIABLE DISEASES.	At all Ages	At ages—years.						
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards
Small-pox	0	....	....	1	....	....	2	1
Cholera	0	....	....	....	....	....	....	....
Plague	0	....	....	....	....	....	....	....
Diphtheria	1	....	....	....	....	....	....	....
Erysipelas	3	....	....	....	....	....	....	....
Scarlet fever	14	....	2	10	2	....	....	....
Typhus fever	0	....	....	....	....	....	....	....
Enteric fever	1	....	....	....	....	1	....	....
Relapsing fever	0	....	....	....	....	....	....	....
Continued fever	0	....	....	....	....	....	....	....
Pueperal fever	0	....	....	....	....	....	....	....
Pulmonary Tuberculosis	19	....	1	4	4	8	2	....
Other forms of Tuberculosis	3	....	....	1	1	....	1	....
TOTALS	41	0	3	16	7	9	5	1

Isolation Hospital, 1 mile from Raunds, provided by Raunds Urban District Council.

Sanatoria, &c.—Cases sent to Creaton, Northampton.

TOWN WATER SUPPLY.

Certificate of Water Analysis.

September 3rd, 1918.

<i>The Sample contained—</i>						<i>Grains per Gallon</i>
Total solid matter	...	...	..	...	...	45.00
Chlorides	...	...	...	...	...	2.90
Equal to Chloride of Sodium (Common Salt)	...	...	...	...	...	4.77
Nitrates (Expressed as Nitrogen)	...	...	...	...	...	.10
Ammonia (Free)	..	...	...	...	...	.1071
„ (Albuminoid)	...	...	...	...	..	.0021
Oxygen absorbed by organic matter in 15 minutes at						
140° F.	...	...	...	...	...	.0196
Appearance in 2 foot Tube—clear, pale blue.						
Smell when heated to 100° F.—none.						
Metals—none.						
Microscopic Examination—no deposit.						

REMARKS—

Total solid matter, chlorides and nitrates are fairly low and satisfactory.

Albuminoid Ammonia and Oxygen absorbed are very low and show the absence of organic matter.

I consider the water is unpolluted and fit for drinking purposes.

J. WEST KNIGHTS,

Public Analyst.

September 6th, 1918.

Housing (Inspection of District)

Regulations, 1910, (September 2nd.)

<p>Number of dwelling houses inspected under and for the purposes of Section 17 of the Act of 1909.</p> <p style="text-align: center;">182</p>	<p>Number of dwelling houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation.</p> <p style="text-align: center;">32</p>
<p>Number of representations made to the Local Authority with a view to the making of Closing Orders.</p> <p style="text-align: center;">32</p>	<p>Number of Closing Orders made.</p> <p style="text-align: center;">11</p>
<p>Number of dwelling houses the defects in which were remedied without the making of Closing Orders</p> <p style="text-align: center;">3</p> <p>and 12 in hand being remedied at the close of the year.</p>	<p>Number of dwelling houses which after the making of Closing Orders, were put into a fit state for human habitation.</p> <p style="text-align: center;">6</p> <p>and 3 in hand at the close of year.</p>
<p>Number of houses demolished as being unfit for human habitation.</p> <p style="text-align: center;">9</p>	<p>Number of cases of overcrowding found and dealt with.</p> <p style="text-align: center;">7</p>
<p>Number of houses closed as being unfit for human habitation but not demolished at the end of the year.</p> <p style="text-align: center;">2</p>	<p>The chief defects found in the above houses were—</p> <p style="padding-left: 40px;">Dampness, Defective Roofs, Structural Defects, Insufficient Light & Ventilation</p>

**Particulars with respect to the Inspection of Dwelling-Houses
and Nuisances found and abated, etc., in 1913.**

Number of houses inspected	...	...	...	...	527
Statutory notices served	...	...	...	...	5
Informal notices sent	...	...	...	...	59
Number of cases of overcrowding found and dealt with					7
Blocked drains at interception	...	..	...		21
Gulleys blocked	...	...	...	...	7
Water closets found blocked	...	...	...	...	14
Houses without proper receptacles for house refuse	...				7
Accumulation of house refuse	...	...	...	...	2
Closets not provided at workshops for both sexes	...				1
Factory drains blocked	...	..	...	...	4
W.C.'s found in an unsanitary condition owing to an insufficient supply of water and flushing appliances					11
Water closets provided with flushing appliances and laid on	...	...	...	...	18
Pail closets converted into water closets	...				8
Town water laid on to houses without a proper supply					18
Waste water closet taken out and w.c. with flushing appliances fixed	...	...	...	...	2
Cowsheds with defective floors	...	...	...		2
Cowsheds with defective drains	...	...	...		1
Accumulation of manure	...	...	...	...	2
Pigs kept so as to be a nuisance	...	...	...		1
Houses disinfected after cases of infectious disease	...				19
Prosecution of non-abatement of nuisances	...				1
Number of houses disinfected after cases of Pulmonary Tuberculosis	...	...	...	...	10

**Particulars as to Water Supply to Houses and Closets, etc., at
the end of the year.**

Houses having proper water closets provided with flushing appliances and water laid on	...	589
Houses having water closets which are flushed by hand		123
Houses having closets of the waste water type	...	160
Houses outside the sewerage area having pail closets		25
Houses supplied with water direct from the town water mains	...	808
Houses outside the sewerage area, the drains of which discharge into a cesspool	...	9
Houses connected with the public sewer	...	1

Annual Report of the Medical Officer of Health for
1913 for the Urban District of Raunds.

**Factories, Workshops, Laundries, Workplaces
and Homework.**

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises	Number of		
	Inspections	Written Notices	Prosecutions
Factories (including Factory Laundries)	66	14	0
Workshops (including Workshop Laundries)	54	1	0
Workplaces (other than Outworkers' Premises included in Part 3 of this Report)	26	1	0
Total	146	16	0

2.—DEFECTS FOUND.

Particulars	Number of Defects			Number of Prosecutions.
	Found	Remedied	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—</i>				
Want of cleanliness	0	0	0	0
Want of Ventilation	0	0	0	0
Overcrowding	0	0	0	0
Want of drainage of floors	0	0	0	0
Other nuisances	4	4	0	0
Sanitary accommodation {	insufficient	0	0	0
	unsuitable or defective	0	0	0
	not separate for sexes	0	0	0
<i>Offences under the Factory & Workshop Act :—</i>				
Illegal occupation of underground bakehouses ...	0	0	0	0
Breach of special sanitary requirement for bakehouses	0	0	0	0
Other offences	1	1	0	0
Total	5	5	0	0

3. Home Work.

Nature of Work	Lists received from Employers.				Notices served on Occupiers as to keeping or sending lists
	Sending twice in the year		Sending once in the year		
	Lists	Workmen	Lists	Workmen	
Wearing Apparel— Making, &c.	4	108	8	48	8

4. Registered Workshops.

Workshops on the Register (s. 131) at the end of the year	Number
Tailors ...	3
Dressmakers ...	2
Milliners ...	2
Basket Makers ...	1
Bakehouses ...	6
Bicycle Shops ...	3
Letterpress Printers ...	1
Boot and Shoe Work ...	2
Total number of Workshops on Register ...	20

5. Other Matters.

Class	Number
Matters Notified to H.M. Inspector of Factories—	
Failure to affix Abstract of Factory and Workshop Act (s. 133) ...	0
Action taken in matters referred by H.M. Inspector as remedial under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)—	
Notified by H.M. Inspector ...	0
Reports (of action taken) sent to H.M. Inspector ...	0
Other ...	0
Underground Bakehouses (s. 101) :—	
Certificates granted during the year ...	0
In use at the end of the year ...	0

SUMMARY OF OBSERVATIONS, 1913.

Taken at the Raunds Climatological Station.

Latitude, 52 degs. 20 mins. N.

Longitude, 32 mins. W.

Altitude, 204 feet.

	Average Rainfall in inches	Rainfall in 1913		Hours of Sunshine		Average Temperature in degrees	
January ...	1.71	2.92	(3.41)	48.0	(44.4)	39.0	(37.0)
February	1.42	0.66	(1.44)	63.5	(61.8)	39.4	(41.0)
March ...	1.77	3.14	(2.30)	103.7	(98.7)	43.4	(45.3)
April ...	1.34	2.48	(0.06)	120.2	(236.9)	46.1	(48.0)
May ..	2.02	1.70	(1.68)	197.0	(164.1)	54.4	(55.3)
June ...	2.20	0.70	(4.30)	192.1	(162.5)	58.7	(58.1)
July ...	2.02	0.77	(4.13)	70.1	(138.0)	58.5	(62.3)
August ...	2.84	0.74	(7.30)	146.9	(109.3)	60.3	(56.3)
September	1.26	1.21	(0.99)	114.4	(105.7)	58.4	(52.7)
October	2.15	2.82	(2.06)	112.8	(127.5)	50.9	(47.0)
November	2.08	1.90	(1.58)	87.4	(26.8)	43.9	(41.8)
December	2.86	0.48	(3.00)	36.4	(27.7)	38.6	(43.4)
	23.67	19.52	(32.25)	1292.5	(1303.4)	49.3	(49.0)

N.B. The figures in brackets refer to corresponding months of 1912.

RAINFALL TABLE.

1903 ...	30.31 inches	1909 ...	24.63 inches
1904 ...	19.22 „	1910 ...	24.80 „
1905 ...	18.31 „	1911 ...	19.25 „
1906 ...	26.55 „	1912 ...	32.25 „
1907 ...	25.47 „	1913 ...	19.52 „
1908 ...	22.15 „		

TEMPERATURE.

Maximum (in sun) 129 degrees on Monday, June 16th.

„ (in shade) 83 „ „ „

„ (1 foot in the earth) 62.5 degrees on Thursday, June 19th.

„ (4 feet in the earth) 57.5 degrees on Wednesday, Aug. 20th.

Minimum (on grass) 13 degrees on Sunday, April 13th.

„ (4 feet above ground) 20 degrees on Monday, January 13th.

„ (1 foot in the earth) 36.5 degrees on Thursday, Feb. 25th.

„ (4 feet in the earth) 43 degrees on Thursday, Feb. 27th.

Average Temperature for the whole year 49.3 degrees.

The above figures show that the year was a dry one, the rainfall being 4.15 inches below the average, and 12.73 inches below the phenomenal rainfall of 1912.

The sunshine was somewhat deficient, but it is a remarkable fact that November had 25 per cent more sunshine than July. The sunniest day was Tuesday, 3rd June, when 13.4 hours of sunshine were measured.

The instruments were tested by F. J. W. Whipple, Esq., of the Meteorological Office, who visited the station on November 26th, 1913.

LEON G. HAROLD LEE, F.R.Met.S., etc.,

Observer for H.M. Govt. Meteorological Office.

RAUNDS,

1st January, 1914.